

PLANNED COURSE

SUBJECT AREA: Science and Technology

GRADE/COURSE: 5

Standard And Strand 3.1 Unifying Themes

OBJECTIVES	PERFORMANCE INDICATORS	ASSESSMENTS (Variety as per Section 4.52, Chapter 4)
<p>A. Identify/explore parts of a natural/human-made system.</p> <p>B. Identify parts of models.</p> <p>C. Identify patterns as repeated processes or recurring elements in science and technology.</p>	<p>Describe the component parts of a natural system (e.g. nervous, skeletal, reproductive) Use technology (microscopes and software) to develop an awareness of order in a system. Describe a system as a group of related parts that work together to achieve a desired result (e.g. digestive system).</p> <p>Identify parts of different models (e.g. body systems, cells, atoms, and molecules). Identify and describe different types of models and their functions.</p> <p>Identify different forms of patterns and use them to group and classify specific objects.</p>	<p>*Specific assessments will be designed upon purchase of new science materials.</p>

OBJECTIVES	PERFORMANCE INDICATORS	ASSESSMENTS (Variety as per Section 4.52, Chapter 4)
Demonstrate and describe scale as a way to compare measurements.	Create a model showing an object to scale (e.g. floor plan of classroom, scale drawing of body).	

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Standard And Strand 3.3 Biological Sciences

OBJECTIVES	PERFORMANCE INDICATORS	ASSESSMENTS (Variety as per Section 4.52, Chapter 4)
A. Describe the similarities and differences that characterize diverse living things. B. Describe the cell as the basic structural and functional unit of living things.	Describe how the structures of living things help them function in unique ways. Identify the levels of organization from cell to organism. Compare life processes at the organism level with life processes at the cellular level.	*Specific assessments will be designed upon purchase of new science materials.

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Standard And Strand 3.4 Physical Science, Chemistry and Physics

OBJECTIVES	PERFORMANCE INDICATORS	ASSESSMENTS (Variety as per Section 4.52, Chapter 4)
A. Recognize basic concepts about the structure and properties of matter.	Explore atoms and their structure. Explain the relationship between atoms and elements. Explore the characteristics of the Periodic Table of Elements (e.g. symbol, atomic number). Identify elements as basic building blocks of matter that cannot be broken down chemically. Explain the relationship between molecules and compounds. Distinguish compounds from mixtures.	*Specific assessments will be designed upon purchase of new science materials.

OBJECTIVES	PERFORMANCE INDICATORS	ASSESSMENTS (Variety as per Section 4.52, Chapter 4)
<p>B. Explore different types of force and motion.</p>	<p>Investigate various types of motion (e.g. periodic, circular).</p> <p>Use quantitative descriptions of motion (e.g. distance/time = speed).</p> <p>Graphically represent motion.</p> <p>Explore the Laws of Motion by examining factors that affect motion (e.g. how mass/inertia and forces such as friction affect speed).</p> <p>Describe the motion of an object based on its position, direction and speed.</p>	<p>*Specific assessments will be designed upon purchase of new science materials.</p>

OBJECTIVES	PERFORMANCE INDICATORS	ASSESSMENTS (Variety as per Section 4.52, Chapter 4)
<p>C. Explain the behavior of the Earth's water systems.</p>	<p>Describe and locate significant Earth's resources (e.g. fossil fuels, water, timber, rock types).</p> <p>Identify and locate significant earth resources (e.g. rock types, oil, gas, coal deposits) in Pennsylvania.</p> <p>Explain the value and uses of different Earth resources (e.g. selected minerals, ores, fuel sources, agricultural uses).</p> <p>Explain the water cycle using the processes of evaporation and condensation.</p> <p>Describe factors that affect evaporation and condensation.</p> <p>Describe how water systems are connected.</p>	<p>*Specific assessments will be designed upon purchase of new science materials.</p>

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Standard And Strand 3.6 Technology

OBJECTIVES	PERFORMANCE INDICATORS	ASSESSMENTS (Variety as per Section 4.52, Chapter 4)
<p>A. Explain biotechnologies that relate to propagating, growing, maintaining, adapting, treating, and converting.</p> <p>C. Identify physical technologies of structural design, analysis and engineering, personnel relations, financial affairs, structural production, marketing, research and design.</p>	<p>Identify and explain the impact that a specific medical advancement has had on society.</p> <p>Explain the factors that were taken into consideration when a specific object was designed.</p> <p>Use knowledge of material effectiveness to solve specific construction problems (e.g., steel vs. wood bridges).</p> <p>Differentiate among the different types of construction applications (e.g., microwave tower, power plants, aircrafts).</p> <p>Evaluate a construction activity by specifying task analyses and necessary resources.</p>	<p>*Specific assessments will be designed upon purchase of new science materials.</p>

OBJECTIVES	PERFORMANCE INDICATORS	ASSESSMENTS (Variety as per Section 4.52, Chapter 4)
	<p>Explain the difference between design engineering and production engineering processes.</p> <p>Explain transportation technologies of propelling, structuring, suspending, guiding, controlling and supporting.</p> <p>Identify and explain the workings of several mechanical power systems.</p> <p>Model and explain examples of vehicular propulsion, control, guidance, structure and suspension systems.</p> <p>Explain the limitations of land, marine, air and space transportation systems.</p>	<p>*Specific assessments will be designed upon purchase of new science materials.</p>

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Standard And Strand 3.7 Technological Devices

OBJECTIVES	PERFORMANCE INDICATORS	ASSESSMENTS (Variety as per Section 4.52, Chapter 4)
E. Apply basic computer communications systems.	Apply basic e-mail functions. Apply basic online research techniques to solve a specific problem.	*Specific assessments will be designed upon purchase of new science materials.

